

CONSUMER CONFIDENCE REPORT REGULATIONS Effective May 26, 2001**Article 1. Definitions.****Section 64400.42. Customer.**

“Customer” means a service connection to which water is delivered by a community water system or a person that receives water from a nontransient-noncommunity water system for more than six months of the year.

NOTE: Authority cited: Sections 116350 and 116375, Health and Safety Code.

Reference: Sections 116275 and 116470, Health and Safety Code.

Section 64400.44. Detected.

“Detected” means at or above the detection limit for purposes of reporting (DLR).

NOTE: Authority cited: Sections 116350 and 116375, Health and Safety Code.

Reference: Sections 116275 and 116470, Health and Safety Code.

Article 19. Notification of the Department and Water Consumers**~~Section 64463.1 Public Information.~~**

- ~~(a) An annual report providing specific information on the water quality of all sources shall be distributed by each community water system and nontransient noncommunity water system to each customer. The report shall provide as a minimum specific information on concentrations of microbiological contaminants, minerals, physical agents, inorganic chemicals, organic chemicals and radioactivity which are present in the water supply except that with regard to organic chemicals, nontransient noncommunity water systems shall be subject to the public information requirements of this subsection only to the extent that such water systems are subject to the monitoring requirements prescribed in Section 64445. Upon request, the Department will consider methods other than direct distribution to customers for meeting the requirements of this section.~~
- ~~(b) The community water system or nontransient noncommunity water system shall have available for review or distribution, upon request, the most recent water quality information available on each water source. The information available shall provide specific information on concentrations of microbiological contaminants, minerals, physical agents, inorganic chemicals, organic chemicals and radioactivity which are present in the water supply except that with regard to organic chemicals, nontransient noncommunity water systems shall be subject to the public information requirements of this subsection only to the extent that such water systems are subject to the monitoring requirements prescribed in Section 64445. The annual report prescribed in (a) shall inform each customer of the name and telephone number of a person to contact to obtain specific water quality information.~~

NOTE: Authority cited: Sections 208, 4017, 4023.1, 4023.3 and 4030, Health and Safety Code.

Reference: Sections 4024 and 4028, Health and Safety Code.

Article 20. Consumer Confidence Report.

Section 64480. Applicability and Distribution.

- (a) Except as provided in subsection (b), each community and nontransient-noncommunity (NTNC) water system shall prepare and deliver the first Consumer Confidence Report by July 1, 2001, and subsequent reports by July 1 annually thereafter. The first Consumer Confidence Report shall contain data collected during, or prior to, calendar year 2000, as prescribed by section 64481(d)(1). Each Consumer Confidence Report thereafter shall contain data collected during, or prior to, the previous calendar year.
- (b) A new community or NTNC water system shall deliver its first Consumer Confidence Report by July 1 of the year after its first full calendar year in operation and subsequent reports by July 1 annually thereafter.
- (c) A community or NTNC water system that sells water to another community or NTNC water system shall deliver the applicable information required in section 64481 to the purchasing system by no later than April 1 of each year or on a date mutually agreed upon by the seller and the purchaser, and specifically included in a contract between the parties.

NOTE: Authority cited: Sections 116350 and 116375, Health and Safety Code.

Reference: Sections 116275 and 116470, Health and Safety Code.

Section 64481. Content of the Consumer Confidence Report.

- (a) Each Consumer Confidence Report shall contain information on the source of the water delivered, including:
 - (1) The type of water delivered by the water system, e.g., surface water, ground water; and the commonly used name (if any) and location of the body (or bodies) of water.
 - (2) If a source water assessment has been completed, notification that the assessment is available, how to obtain it, the date it was completed or last updated, and a brief summary of the system's vulnerability to potential sources of contamination, using language provided by the Department if the Department conducted the assessment.
- (b) For any of the following terms used in the Consumer Confidence Report, the water system shall provide the specified language below:
 - (1) Regulatory Action Level: "The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow."
 - (2) Maximum Contaminant Level or MCL: "The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs are set to protect the odor, taste, and appearance of drinking water."
 - (3) Maximum Contaminant Level Goal or MCLG: "The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency."

- (4) Public Health Goal or PHG: “The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.”
- (5) Primary Drinking Water Standard or PDWS: “MCLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.”
- (6) Treatment technique: “A required process intended to reduce the level of a contaminant in drinking water.”
- (7) Variances and exemptions: “Department permission to exceed an MCL or not comply with a treatment technique under certain conditions.”
- (c) If any of the following are detected, information for each pursuant to subsection (d) shall be included in the Consumer Confidence Report:
 - (1) Contaminants subject to an MCL, regulatory action level, or treatment technique (regulated contaminants), as specified in sections 64426.1, 64431, 64439, 64441, 64443, 64444, 64448, 64449, 64653 and 64672.3;
 - (2) Contaminants specified in section 64450 for which monitoring is required (unregulated contaminants); and
 - (3) Disinfection by-products or microbial contaminants detected in the finished water for which monitoring is required by 40 CFR §§141.142 and 141.143 (Information Collection Rule, Federal Register 61, p 24354, May 14, 1996;), except as provided under subsection (e).
 - (4) Sodium and hardness.
- (d) For contaminants identified in subsection (c), the water system shall include in the Consumer Confidence Report one table or several adjacent tables that have been developed pursuant to this subsection. Any additional monitoring results that a water system chooses to include in its Consumer Confidence Report shall be displayed separately.
 - (1) The data in the table(s) shall be derived from data collected to comply with U.S. Environmental Protection Agency (USEPA) and Department monitoring and analytical requirements during calendar year 2000 for the first Consumer Confidence Report and subsequent calendar years thereafter except that:
 - (A) Where a system is allowed to monitor for regulated contaminants less often than once a year, the table(s) shall include the date and results of the most recent sampling and the Consumer Confidence Report shall include a brief statement indicating that the data presented in the table(s) are from the most recent testing done in accordance with the regulations. No data older than 9 years need be included.
 - (B) Results of monitoring in compliance with 40 CFR §§141.142 and 141.143 (Information Collection Rule, Federal Register 61, p 24354, May 14, 1996), need only be included in the table(s) for 5 years from the date of the last sampling or until any of the detected contaminants becomes regulated and subject to routine monitoring requirements, whichever comes first. Both the average and range sample results for the most recent year of sampling shall be included for any detected contaminant.
 - (2) For detected regulated contaminants (listed in subsection (c)(1)), the table(s) shall include:

- (A) The MCL expressed as a number equal to or greater than 1.0;
- (B) For a primary MCL, the public health goal (PHG) in the same units as the MCL; or if no PHG has been set for the contaminant, the table shall include the USEPA maximum contaminant level goal in the same units as the MCL.
- (C) For a detected contaminant that does not have an MCL, the table(s) shall indicate whether there is a treatment technique or specify the regulatory action level applicable to that contaminant, and the Consumer Confidence Report shall include the appropriate language specified in subsection (b);
- (D) For detected contaminants subject to an MCL, except turbidity and total coliforms, the sample result(s) collected at compliance monitoring sampling points shall be reported in the same units as the MCL as follows:
 - 1. When compliance is determined by the results of a single sample, an initial sample averaged with one or two confirmation sample(s), or an average of four quarterly or six monthly samples, results shall be reported as follows:
 - A. For a single sampling point, or multiple sampling points for which data is being individually listed on the Consumer Confidence Report: The sample result; if more than one sample was collected, the average and range of the sample results.
 - B. For more than one sampling point, each of which has been sampled only once and for which data is being summarized together on the Consumer Confidence Report: The average and range of the sample results. If the waters from the sampling points are entering the distribution system at the same point, a flow-weighted average may be reported.
 - C. For multiple sampling points, one or more of which has been sampled more than once and for which data is being summarized together on the Consumer Confidence Report: The average of the individual sampling point averages and range of all the sample results. If the waters from the sampling points are entering the distribution system at the same point, a flow-weighted average may be reported.
 - 2. When compliance with the MCL is determined by calculating a running annual average of all samples taken at a sampling point: The highest running annual average of the sampling point and the range of sample results or, if sampling points are summarized together for the Consumer Confidence Report, the highest running annual average of any of the sampling points and the range of sample results from all the sampling points.
 - 3. When compliance with the MCL is determined on a system-wide basis by calculating a running annual average of all sampling point averages: The highest running annual average and the range of sample results from all the sampling points.
 - 4. When compliance with the MCL is determined on the basis of monitoring after treatment installed to remove a contaminant: The average level detected in the water entering the distribution system and the range of sample results.

5. If an MCL compliance determination was made in the year for which sample results are being reported and that determination was based on an average of results from both the previous and reporting years, then the compliance determination average shall be reported, but the range shall be based only on results from the year for which data is being reported.

(E) For turbidity:

1. When it is reported pursuant to the requirements of section 64652.5 (filtration avoidance): The highest value.
2. When it is reported pursuant to section 64653 (filtration): The highest single measurement based on compliance reporting and the lowest monthly percentage of samples meeting the turbidity limits specified in section 64653 for the filtration technology being used.

(F) For lead and copper: the 90th percentile value of the most recent round of sampling, the number of sites sampled, and the number of sampling sites exceeding the action level.

(G) For total coliform:

1. The highest monthly number of positive samples for systems collecting fewer than 40 samples per month; or
2. The highest monthly percentage of positive samples for systems collecting at least 40 samples per month.

(H) For fecal coliform or E. coli: the total number of positive samples during the year.

(I) The likely source(s) of detected contaminants for any detected contaminant with an MCL. If the water system lacks specific information on the likely source, the table(s) shall include one or more of the typical sources for that contaminant listed in appendices 64481-A or 64481-B that are most applicable to the system.

(3) The table(s) shall clearly identify any data indicating violations of MCLs or treatment techniques and the Consumer Confidence Report shall give information on each violation including the length of the violation, potential adverse health effects (primary MCLs only), and actions taken by the system to address the violation. To describe the potential health effects, the system shall use the relevant language pursuant to appendices 64481-C through 64481-G.

(4) For detected unregulated contaminants for which monitoring is required (except *Cryptosporidium*), the table(s) shall contain the average and range at which the contaminant was detected.

(e) If the system has performed any monitoring for *Cryptosporidium*, including monitoring performed to satisfy the requirements of 40 CFR § 141.143 (Information Collection Rule, Federal Register 61, p 24354, May 14, 1996), that indicates that *Cryptosporidium* may be present in the source water or the finished water, the Consumer Confidence Report shall include a summary of the monitoring results and an explanation of their significance.

(f) If the system has performed any monitoring for radon that indicates that radon is present in the finished water, the Consumer Confidence Report shall include the monitoring results and an explanation of their significance.

- (g) For the year covered by the report, the Consumer Confidence Report shall note any violations of (1) through (7) and give related information, including any potential adverse health effects, and the steps the system has taken to correct the violation.
- (1) Monitoring and reporting of compliance data.
 - (2) Filtration and disinfection prescribed by sections 64652, 64652.5, 64653, or 64654. For systems that have failed to install adequate filtration or disinfection equipment or processes, or have had a failure of such equipment or processes that constitutes a violation, the Consumer Confidence Report shall include the following language as part of the explanation of potential adverse health effects: “Inadequately treated water may contain organisms that can cause illness when consumed. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.”
 - (3) One or more actions prescribed by the lead and copper requirements in sections 64673 through 64679. To address potential adverse health effects, the Consumer Confidence Report shall include the applicable language pursuant to appendix 64481-E for lead, copper, or both.
 - (4) Treatment technique requirements for Acrylamide and Epichlorohydrin in section 64448; to address potential adverse health effects, the Consumer Confidence Report shall include the relevant language from appendix 64481-G.
 - (5) Recordkeeping of compliance data.
 - (6) Special monitoring requirements prescribed by sections 64450.1, and 64449(c)(2) and (i).
 - (7) Terms of a variance, an exemption, or an administrative or judicial order.
- (h) If a system is operating under the terms of a variance or an exemption issued under section 116430 or 116425 of the Health and Safety Code, the Consumer Confidence Report shall contain:
- (1) An explanation of the reasons for the variance or exemption;
 - (2) The date on which the variance or exemption was issued;
 - (3) A brief status report on the steps the system is taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the variance or exemption; and
 - (4) A notice of any opportunity for public input in the review, or renewal, of the variance or exemption.
- (i) The Consumer Confidence Report shall contain the language in paragraphs (1) through (4).
- (1) “The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.”
 - (2) “Contaminants that may be present in source water include:
 - (A) Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

- (B) Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- (C) Pesticides and herbicides, that may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- (D) Organic chemical contaminants, including synthetic and volatile organic chemicals, that are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- (E) Radioactive contaminants, that can be naturally-occurring or be the result of oil and gas production and mining activities.”
- (3) “In order to ensure that tap water is safe to drink, the U.S. Environmental Protection Agency (USEPA) and the State Department of Health Services (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that provide the same protection for public health.”
- (4) “Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the USEPA’s Safe Drinking Water Hotline (1-800-426-4791).”
- (j) All Consumer Confidence Reports shall prominently display the following language: “Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).”
- (k) The Consumer Confidence Report shall include the telephone number of the owner, operator, or designee of the water system as a source of additional information concerning the report.
- (l) All Consumer Confidence Reports shall contain information in Spanish regarding the importance of the report or contain a telephone number or address where Spanish-speaking residents may contact the system to obtain a translated copy of the report or assistance in Spanish. For each non-English speaking group other than Spanish-speaking that exceeds 1,000 residents or 10% of the residents in a community, whichever is less, the Consumer Confidence Report shall contain information in the appropriate language(s) regarding the importance of the report or contain a telephone number or address where such residents may contact the system to obtain a translated copy of the report or assistance in the appropriate language.

(m) The Consumer Confidence Report shall include information (e.g., time and place of regularly scheduled board meetings) about opportunities for public participation in decisions that may affect the quality of the water.

Appendix 64481-A. Typical Origins of Contaminants with Primary MCLs

<u>Contaminant</u>	<u>Major origins in drinking water</u>
<u>Microbiological</u>	
<u>Total coliform bacteria</u>	<u>Naturally present in the environment</u>
<u>Fecal coliform and <i>E. coli</i></u>	<u>Human and animal fecal waste</u>
<u>Turbidity</u>	<u>Soil runoff</u>
<u>Radioactive</u>	
<u>Gross Beta particle activity</u>	<u>Decay of natural and man-made deposits</u>
<u>Strontium-90</u>	<u>Decay of natural and man-made deposits</u>
<u>Tritium</u>	<u>Decay of natural and man-made deposits</u>
<u>Gross Alpha particle activity</u>	<u>Erosion of natural deposits</u>
<u>Combined radium 226/228</u>	<u>Erosion of natural deposits</u>
<u>Uranium</u>	<u>Erosion of natural deposits</u>
<u>Inorganic</u>	
<u>Aluminum</u>	<u>Erosion of natural deposits; residue from some surface water treatment processes</u>
<u>Antimony</u>	<u>Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder</u>
<u>Arsenic</u>	<u>Erosion of natural deposits; runoff from orchards; glass and electronics production wastes</u>
<u>Asbestos</u>	<u>Internal corrosion of asbestos cement water mains; erosion of natural deposits</u>
<u>Barium</u>	<u>Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits</u>
<u>Beryllium</u>	<u>Discharge from metal refineries, coal-burning factories, and electrical, aerospace, and defense industries</u>
<u>Cadmium</u>	<u>Internal corrosion of galvanized pipes; erosion of natural deposits; discharge from electroplating and industrial chemical factories, and metal refineries; runoff from waste batteries and paints</u>
<u>Chromium</u>	<u>Discharge from steel and pulp mills and chrome plating; erosion of natural deposits</u>
<u>Copper</u>	<u>Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives</u>
<u>Cyanide</u>	<u>Discharge from steel/metal, plastic and fertilizer factories</u>
<u>Fluoride</u>	<u>Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories</u>
<u>Lead</u>	<u>Internal corrosion of household water plumbing systems; discharges</u>

	<u>from industrial manufacturers; erosion of natural deposits</u>
<u>Mercury</u>	<u>Erosion of natural deposits; discharge from refineries and factories; runoff from landfills and cropland</u>
<u>Nickel</u>	<u>Erosion of natural deposits; discharge from metal factories</u>
<u>Nitrate</u>	<u>Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits</u>
<u>Nitrite</u>	<u>Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits</u>
<u>Selenium</u>	<u>Discharge from petroleum, glass, and metal refineries; erosion of natural deposits; discharge from mines and chemical manufacturers; runoff from livestock lots (feed additive)</u>
<u>Thallium</u>	<u>Leaching from ore-processing sites; discharge from electronics, glass, and drug factories</u>
<i><u>Synthetic organic</u></i>	
<u>2,4-D</u>	<u>Runoff from herbicide used on row crops, range land, lawns, and aquatic weeds</u>
<u>2,4,5-TP (Silvex)</u>	<u>Residue of banned herbicide</u>
<u>Acrylamide</u>	<u>Added to water during sewage/wastewater treatment</u>
<u>Alachlor</u>	<u>Runoff from herbicide used on row crops</u>
<u>Atrazine</u>	<u>Runoff from herbicide used on row crops and along railroad and highway right-of-ways</u>
<u>Bentazon</u>	<u>Runoff/leaching from herbicide used on beans, peppers, corn, peanuts, rice, and ornamental grasses</u>
<u>Benzo(a)pyrene [PAH]</u>	<u>Leaching from linings of water storage tanks and distribution mains</u>
<u>Carbofuran</u>	<u>Leaching of soil fumigant used on rice and alfalfa, and grape vineyards</u>
<u>Chlordane</u>	<u>Residue of banned insecticide</u>
<u>Dalapon</u>	<u>Runoff from herbicide used on right-of-ways, and crops and landscape maintenance</u>
<u>Dibromochloropropane (DBCP)</u>	<u>Banned nematocide that may still be present in soils due to runoff/leaching from former use on soybeans, cotton, vineyards, tomatoes, and tree fruit</u>
<u>Di(2-ethylhexyl) adipate</u>	<u>Discharge from chemical factories</u>
<u>Di(2-ethylhexyl) phthalate</u>	<u>Discharge from rubber and chemical factories; inert ingredient in pesticides</u>
<u>Dinoseb</u>	<u>Runoff from herbicide used on soybeans, vegetables, and fruits</u>
<u>Dioxin [2,3,7,8-TCDD]</u>	<u>Emissions from waste incineration and other combustion; discharge from chemical factories</u>
<u>Diquat</u>	<u>Runoff from herbicide use for terrestrial and aquatic weeds</u>
<u>Endothall</u>	<u>Runoff from herbicide use for terrestrial and aquatic weeds; defoliant</u>
<u>Endrin</u>	<u>Residue of banned insecticide and rodenticide</u>
<u>Epichlorohydrin</u>	<u>Discharge from industrial chemical factories; impurity of some water treatment chemicals</u>

<u>Ethylene dibromide (EDB)</u>	<u>Discharge from petroleum refineries; underground gas tank leaks; banned nematocide that may still be present in soils due to runoff and leaching from grain and fruit crops</u>
<u>Glyphosate</u>	<u>Runoff from herbicide use</u>
<u>Heptachlor</u>	<u>Residue of banned insecticide</u>
<u>Heptachlor epoxide</u>	<u>Breakdown of heptachlor</u>
<u>Hexachlorobenzene</u>	<u>Discharge from metal refineries and agricultural chemical factories; byproduct of chlorination reactions in wastewater</u>
<u>Hexachlorocyclopentadiene</u>	<u>Discharge from chemical factories</u>
<u>Lindane</u>	<u>Runoff/leaching from insecticide used on cattle, lumber, gardens</u>
<u>Methoxychlor</u>	<u>Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock</u>
<u>Molinate [Ordram]</u>	<u>Runoff/leaching from herbicide used on rice</u>
<u>Oxamyl [Vydate]</u>	<u>Runoff/leaching from insecticide used on field crops, fruits and ornamentals, especially apples, potatoes, and tomatoes</u>
<u>Pentachlorophenol</u>	<u>Discharge from wood preserving factories, cotton and other insecticidal/herbicidal uses</u>
<u>Picloram</u>	<u>Herbicide runoff</u>
<u>Polychlorinated biphenyls [PCBs]</u>	<u>Runoff from landfills; discharge of waste chemicals</u>
<u>Simazine</u>	<u>Herbicide runoff</u>
<u>Thiobencarb</u>	<u>Runoff/leaching from herbicide used on rice</u>
<u>Toxaphene</u>	<u>Runoff/leaching from insecticide used on cotton and cattle</u>

<u>Volatile organic</u>	
<u>Benzene</u>	<u>Discharge from plastics, dyes and nylon factories; leaching from gas storage tanks and landfills</u>
<u>Carbon tetrachloride</u>	<u>Discharge from chemical plants and other industrial activities</u>
<u>1,2-Dichlorobenzene</u>	<u>Discharge from industrial chemical factories</u>
<u>1,4-Dichlorobenzene</u>	<u>Discharge from industrial chemical factories</u>
<u>1,1-Dichloroethane</u>	<u>Extraction and degreasing solvent; used in manufacture of pharmaceuticals, stone, clay and glass products; fumigant</u>
<u>1,2-Dichloroethane</u>	<u>Discharge from industrial chemical factories</u>
<u>1,1-Dichloroethylene</u>	<u>Discharge from industrial chemical factories</u>
<u>cis-1,2-Dichloroethylene</u>	<u>Discharge from industrial chemical factories; major biodegradation byproduct of TCE and PCE groundwater contamination</u>
<u>trans-1,2-Dichloroethylene</u>	<u>Discharge from industrial chemical factories; minor biodegradation byproduct of TCE and PCE groundwater contamination</u>
<u>Dichloromethane</u>	<u>Discharge from pharmaceutical and chemical factories; insecticide</u>
<u>1,2-Dichloropropane</u>	<u>Discharge from industrial chemical factories; primary component of some fumigants</u>
<u>1,3-Dichloropropene</u>	<u>Runoff/leaching from nematocide used on croplands</u>
<u>Ethylbenzene</u>	<u>Discharge from petroleum refineries; industrial chemical factories</u>
<u>Monochlorobenzene</u>	<u>Discharge from industrial and agricultural chemical factories and drycleaning facilities</u>
<u>Styrene</u>	<u>Discharge from rubber and plastic factories; leaching from landfills</u>
<u>1,1,2,2-Tetrachloroethane</u>	<u>Discharge from industrial and agricultural chemical factories; solvent used in production of TCE, pesticides, varnish and lacquers</u>
<u>Tetrachloroethylene (PCE)</u>	<u>Discharge from factories, dry cleaners, and auto shops (metal degreaser)</u>
<u>1,2,4-Trichlorobenzene</u>	<u>Discharge from textile-finishing factories</u>
<u>1,1,1-Trichloroethane</u>	<u>Discharge from metal degreasing sites and other factories; manufacture of food wrappings</u>
<u>1,1,2-Trichloroethane</u>	<u>Discharge from industrial chemical factories</u>
<u>Trichloroethylene (TCE)</u>	<u>Discharge from metal degreasing sites and other factories</u>
<u>TTHMs [total trihalomethanes]</u>	<u>By-product of drinking water chlorination</u>
<u>Toluene</u>	<u>Discharge from petroleum and chemical factories; underground gas tank leaks</u>
<u>Trichlorofluoromethane</u>	<u>Discharge from industrial factories; degreasing solvent; propellant and refrigerant</u>
<u>1,1,2-Trichloro-1,2,2-Trifluoroethane</u>	<u>Discharge from metal degreasing sites and other factories; drycleaning solvent; refrigerant</u>
<u>Vinyl chloride</u>	<u>Leaching from PVC piping; discharge from plastics factories; biodegradation byproduct of TCE and PCE groundwater contamination</u>
<u>Xylenes</u>	<u>Discharge from petroleum and chemical factories; fuel solvent</u>

Appendix 64481-B. Typical Origins of Contaminants with Secondary MCLs

<u>Contaminant</u>	<u>Major origins in drinking water</u>
<u>Aluminum</u>	<u>Erosion of natural deposits; residual from some surface water treatment processes</u>
<u>Color</u>	<u>Naturally-occurring organic materials</u>
<u>Corrosivity</u>	<u>Natural or industrially-influenced balance of hydrogen, carbon and oxygen in the water; affected by temperature and other factors.</u>
<u>Foaming Agents (MBAS)</u>	<u>Municipal and industrial waste discharges</u>
<u>Iron</u>	<u>Leaching from natural deposits; industrial wastes</u>
<u>Manganese</u>	<u>Leaching from natural deposits</u>
<u>Methyl-tert-butyl ether (MTBE)</u>	<u>Leaking underground storage tanks; discharge from petroleum and chemical factories;</u>
<u>Odor---Threshold</u>	<u>Naturally-occurring organic materials</u>
<u>Silver</u>	<u>Industrial discharges</u>
<u>Thiobencarb</u>	<u>Runoff/leaching from rice herbicide</u>
<u>Turbidity</u>	<u>Soil runoff</u>
<u>Zinc</u>	<u>Runoff/leaching from natural deposits; industrial wastes</u>
<u>Total dissolved solids</u>	<u>Runoff/leaching from natural deposits</u>
<u>Specific conductance</u>	<u>Substances that form ions when in water; seawater influence</u>
<u>Chloride</u>	<u>Runoff/leaching from natural deposits; seawater influence</u>
<u>Sulfate</u>	<u>Runoff/leaching from natural deposits; industrial wastes</u>

Appendix 64481-C. Health Effects Language for the Consumer Confidence Report – Microbiological Contaminants.

<u>Contaminant</u>	<u>Health Effects language</u>
<u>Total Coliform</u>	<u>Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.</u>
<u>Fecal coliform/E.Coli</u>	<u>Fecal coliforms and <i>E. coli</i> are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.</u>
<u>Turbidity</u>	<u>Turbidity has no health effects. However, high levels of turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.</u>

**Appendix 64481-D. Health Effects Language for the Consumer Confidence Report –
Radioactive Contaminants.**

<u>Contaminant</u>	<u>Health Effects Language</u>
<u>Gross Beta particle activity</u>	<u>Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.</u>
<u>Strontium-90</u>	<u>Some people who drink water containing strontium-90 in excess of the MCL over many years may have an increased risk of getting cancer.</u>
<u>Tritium</u>	<u>Some people who drink water containing tritium in excess of the MCL over many years may have an increased risk of getting cancer.</u>
<u>Gross Alpha particle activity</u>	<u>Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.</u>
<u>Combined Radium 226/228</u>	<u>Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.</u>
<u>Uranium</u>	<u>Some people who drink water containing uranium in excess of the MCL over many years may have kidney problems or an increased risk of getting cancer.</u>

**Appendix 64481-E. Health Effects Language for the Consumer Confidence Report –
Inorganic Contaminants.**

<u>Contaminant</u>	<u>Health Effects Language</u>
<u>Aluminum</u>	<u>Some people who drink water containing aluminum in excess of the MCL over many years may experience short-term gastrointestinal tract effects.</u>
<u>Antimony</u>	<u>Some people who drink water containing antimony in excess of the MCL over many years may experience increases in blood cholesterol and decreases in blood sugar.</u>
<u>Arsenic</u>	<u>Some people who drink water containing arsenic in excess of the MCL over many years may experience skin damage or circulatory system problems, and may have an increased risk of getting cancer.</u>
<u>Asbestos</u>	<u>Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.</u>
<u>Barium</u>	<u>Some people who drink water containing barium in excess of the MCL over many years may experience an increase in blood pressure.</u>
<u>Beryllium</u>	<u>Some people who drink water containing beryllium in excess of the MCL over many years may develop intestinal lesions.</u>
<u>Cadmium</u>	<u>Some people who drink water containing cadmium in excess of the MCL over</u>

	<u>many years may experience kidney damage.</u>
<u>Chromium</u>	<u>Some people who use water containing chromium in excess of the MCL over many years may experience allergic dermatitis.</u>
<u>Copper</u>	<u>Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time may experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years may suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.</u>
<u>Cyanide</u>	<u>Some people who drink water containing cyanide in excess of the MCL over many years may experience nerve damage or thyroid problems.</u>
<u>Fluoride</u>	<u>Some people who drink water containing fluoride in excess of the federal MCL of 4 mg/L over many years may get bone disease, including pain and tenderness of the bones. Children who drink water containing fluoride in excess of the state MCL of 2 mg/L may get mottled teeth.</u>
<u>Lead</u>	<u>Infants and children who drink water containing lead in excess of the action level may experience delays in their physical or mental development. Children may show slight deficits in attention span and learning abilities. Adults who drink this water over many years may develop kidney problems or high blood pressure.</u>
<u>Mercury</u>	<u>Some people who drink water containing mercury in excess of the MCL over many years may experience mental disturbances, or impaired physical coordination, speech and hearing.</u>
<u>Nickel</u>	<u>Some people who drink water containing nickel in excess of the MCL over many years may experience liver and heart effects.</u>
<u>Nitrate</u>	<u>Infants below the age of six months who drink water containing nitrate in excess of the MCL may quickly become seriously ill and, if untreated, may die because high nitrate levels can interfere with the capacity of the infant's blood to carry oxygen. Symptoms include shortness of breath and blueness of the skin. High nitrate levels may also affect the oxygen-carrying ability of the blood of pregnant women.</u>
<u>Nitrite</u>	<u>Infants below the age of six months who drink water containing nitrite in excess of the MCL may become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blueness of the skin.</u>
<u>Selenium</u>	<u>Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years may experience hair or fingernail losses, numbness in fingers or toes, or circulation system problems.</u>
<u>Thallium</u>	<u>Some people who drink water containing thallium in excess of the MCL over many years may experience hair loss, changes in their blood, or kidney, intestinal, or liver problems.</u>

**Appendix 64481-F. Health Effects Language for the Consumer Confidence Report –
Volatile Organic Contaminants.**

<u>Contaminant</u>	<u>Health Effects Language</u>
<u>Benzene</u>	<u>Some people who use water containing benzene in excess of the MCL over many years may experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.</u>
<u>Carbon Tetrachloride</u>	<u>Some people who use water containing carbon tetrachloride in excess of the MCL over many years may experience liver problems and may have an increased risk of getting cancer.</u>
<u>1,2-Dichlorobenzene</u>	<u>Some people who drink water containing 1,2-dichlorobenzene in excess of the MCL over many years may experience liver, kidney, or circulatory system problems.</u>
<u>1,4-Dichlorobenzene</u>	<u>Some people who use water containing 1,4-dichlorobenzene in excess of the MCL over many years may experience anemia, liver, kidney, or spleen damage, or changes in their blood.”</u>
<u>1,1-Dichloroethane</u>	<u>Some people who use water containing 1,1-dichloroethane in excess of the MCL over many years may experience nervous system or respiratory problems.</u>
<u>1,2-Dichloroethane</u>	<u>Some people who use water containing 1,2- dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.</u>
<u>1,1-Dichloroethylene</u>	<u>Some people who use water containing 1,1-dichloroethylene in excess of the MCL over many years may experience liver problems.</u>
<u>cis-1,2-Dichloroethylene</u>	<u>Some people who use water containing cis-1,2-dichloroethylene in excess of the MCL over many years may experience liver problems.</u>
<u>trans-1,2-Dichloroethylene</u>	<u>Some people who drink water containing trans-1,2-dichloroethylene in excess of the MCL over many years may experience liver problems.</u>
<u>Dichloromethane</u>	<u>Some people who drink water containing dichloromethane in excess of the MCL over many years may experience liver problems and may have an increased risk of getting cancer.</u>
<u>1,2-Dichloropropane</u>	<u>Some people who use water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.</u>
<u>1,3-Dichloropropene</u>	<u>Some people who use water containing 1,3-dichloropropene in excess of the MCL over many years may have an increased risk of getting cancer.</u>
<u>Ethylbenzene</u>	<u>Some people who use water containing ethylbenzene in excess of the MCL over many years may experience liver or kidney problems.</u>
<u>Monochlorobenzene</u>	<u>Some people who use water containing chlorobenzene in excess of the MCL over many years may experience liver or kidney problems.</u>
<u>Styrene</u>	<u>Some people who drink water containing styrene in excess of the MCL over many years may experience liver, kidney, or circulatory system problems.</u>
<u>1,1,2,2-Tetrachloroethane</u>	<u>Some people who drinking water containing 1,1,2,2-tetrachloroethane in excess of the MCL over many years may experience liver or nervous</u>

	<u>system problems.</u>
<u>Tetrachloroethylene</u>	<u>Some people who use water containing tetrachloroethylene in excess of the MCL over many years may experience liver problems, and may have an increased risk of getting cancer.</u>
<u>1,2,4-Trichlorobenzene</u>	<u>Some people who use water containing 1,2,4-trichlorobenzene in excess of the MCL over many years may experience adrenal gland changes.</u>
<u>1,1,1,-Trichloroethane</u>	<u>Some people who use water containing 1,1,1-trichloroethane in excess of the MCL over many years may experience liver, nervous system, or circulatory system problems.</u>
<u>1,1,2-Trichloroethane</u>	<u>Some people who use water containing 1,1,2- trichloroethane in excess of the MCL over many years may experience liver, kidney, or immune system problems.</u>
<u>Trichloroethylene (TCE)</u>	<u>Some people who use water containing trichloroethylene in excess of the MCL over many years may experience liver problems and may have an increased risk of getting cancer.</u>
<u>TTHMs [Total Trihalomethanes]:</u>	<u>Some people who use water containing trihalomethanes in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer.</u>
<u>Toluene</u>	<u>Some people who use water containing toluene in excess of the MCL over many years may experience nervous system, kidney, or liver problems.</u>
<u>Trichlorofluoromethane</u>	<u>Some people who use water containing trichlorofluoromethane in excess of the MCL over many years may experience liver problems.</u>
<u>1,1,2-Trichloro-1,2,2-trifluoroethane</u>	<u>Some people who use water containing 1,1,2-trichloro-1,2,2-trifluoroethane in excess of the MCL over many years may experience liver problems.</u>
<u>Vinyl Chloride</u>	<u>Some people who use water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.</u>
<u>Xylenes</u>	<u>Some people who use water containing xylenes in excess of the MCL over many years may experience nervous system damage.</u>

Appendix 64481-G. Health Effects Language for the Consumer Confidence Report – Synthetic Organic Contaminants.

<i>Contaminant</i>	<i>Health Effects Language</i>
<u>2,4-D</u>	<u>Some people who use water containing the weed killer 2,4-D in excess of the MCL over many years may experience kidney, liver, or adrenal gland problems.</u>
<u>2,4,5-TP (Silvex)</u>	<u>Some people who drink water containing Silvex in excess of the MCL over many years may experience liver problems.</u>
<u>Acrylamide</u>	<u>Some people who drink water containing high levels of acrylamide over a long period of time may experience nervous system or blood problems, and may have an increased risk of getting cancer.</u>
<u>Alachlor</u>	<u>Some people who use water containing alachlor in excess of the MCL</u>

	<u>over many years may experience eye, liver, kidney, or spleen problems, or experience anemia, and may have an increased risk of getting cancer.</u>
<u>Atrazine</u>	<u>Some people who use water containing atrazine in excess of the MCL over many years may experience cardiovascular system problems or reproductive difficulties.</u>
<u>Bentazon</u>	<u>Some people who drink water containing bentazon in excess of the MCL over many years may experience prostate and gastrointestinal effects.</u>
<u>Benzo(a)pyrene [PAH]</u>	<u>Some people who use water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.</u>
<u>Carbofuran</u>	<u>Some people who use water containing carbofuran in excess of the MCL over many years may experience problems with their blood, or nervous or reproductive system problems.</u>
<u>Chlordane</u>	<u>Some people who use water containing chlordane in excess of the MCL over many years may experience liver or nervous system problems, and may have an increased risk of getting cancer.</u>
<u>Dalapon</u>	<u>Some people who drink water containing dalapon in excess of the MCL over many years may experience minor kidney changes.</u>
<u>Dibromochloropropane (DBCP)</u>	<u>Some people who use water containing DBCP in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.</u>
<u>Di (2-ethylhexyl) adipate</u>	<u>Some people who drink water containing di(2-ethylhexyl) adipate in excess of the MCL over many years may experience general toxic effects or reproductive difficulties.</u>
<u>Di (2-ethylhexyl) phthalate</u>	<u>Some people who use water containing di(2-ethylhexyl) phthalate in excess of the MCL over many years may experience liver problems or reproductive difficulties, and may have an increased risk of getting cancer.</u>
<u>Dinoseb</u>	<u>Some people who drink water containing dinoseb in excess of the MCL over many years may experience reproductive difficulties.</u>
<u>Dioxin (2,3,7,8-TCDD):</u>	<u>Some people who use water containing dioxin in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.</u>
<u>Diquat</u>	<u>Some people who drink water containing diquat in excess of the MCL over many years may get cataracts.</u>
<u>Endothall</u>	<u>Some people who drink water containing endothall in excess of the MCL over many years may experience stomach or intestinal problems.</u>
<u>Endrin</u>	<u>Some people who drink water containing endrin in excess of the MCL over many years may experience liver problems.</u>
<u>Epichlorohydrin</u>	<u>Some people who drink water containing high levels of epichlorohydrin over a long period of time may experience stomach problems, and may have an increased risk of getting cancer.</u>
<u>Ethylene dibromide (EDB)</u>	<u>Some people who use water containing ethylene dibromide in excess of the MCL over many years may experience liver, stomach, reproductive system, or kidney problems, and may have an increased risk of getting cancer.</u>
<u>Glyphosate</u>	<u>Some people who drink water containing glyphosate in excess of the MCL</u>

	<u>over many years may experience kidney problems or reproductive difficulties.</u>
<u>Heptachlor</u>	<u>Some people who use water containing heptachlor in excess of the MCL over many years may experience liver damage and may have an increased risk of getting cancer.</u>
<u>Heptachlor epoxide</u>	<u>Some people who use water containing heptachlor epoxide in excess of the MCL over many years may experience liver damage, and may have an increased risk of getting cancer.</u>
<u>Hexachlorobenzene</u>	<u>Some people who drink water containing hexachlorobenzene in excess of the MCL over many years may experience liver or kidney problems, or adverse reproductive effects, and may have an increased risk of getting cancer.</u>
<u>Hexachlorocyclopentadiene</u>	<u>Some people who use water containing hexachlorocyclopentadiene in excess of the MCL over many years may experience kidney or stomach problems.</u>
<u>Lindane</u>	<u>Some people who drink water containing lindane in excess of the MCL over many years may experience kidney or liver problems.</u>
<u>Methoxychlor</u>	<u>Some people who drink water containing methoxychlor in excess of the MCL over many years may experience reproductive difficulties.</u>
<u>Molinate (Ordram)</u>	<u>Some people who use water containing molinate in excess of the MCL over many years may experience reproductive effects.</u>
<u>Oxamyl [Vydate]:</u>	<u>Some people who drink water containing oxamyl in excess of the MCL over many years may experience slight nervous system effects.</u>
<u>PCBs [Polychlorinated biphenyls]:</u>	<u>Some people who drink water containing PCBs in excess of the MCL over many years may experience changes in their skin, thymus gland problems, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.</u>
<u>Pentachlorophenol</u>	<u>Some people who use water containing pentachlorophenol in excess of the MCL over many years may experience liver or kidney problems, and may have an increased risk of getting cancer.</u>
<u>Picloram</u>	<u>Some people who drink water containing picloram in excess of the MCL over many years may experience liver problems.</u>
<u>Simazine</u>	<u>Some people who use water containing simazine in excess of the MCL over many years may experience blood problems.</u>
<u>Thiobencarb</u>	<u>Some people who use water containing thiobencarb in excess of the MCL over many years may experience body weight and blood effects.</u>
<u>Toxaphene</u>	<u>Some people who use water containing toxaphene in excess of the MCL over many years may experience kidney, liver, or thyroid problems, and may have an increased risk of getting cancer.</u>

NOTE: Authority cited: Sections 116350 and 116375, Health and Safety Code.
Reference: Sections 116275 and 116470, Health and Safety Code.

Section 64482. Required Additional Health Information.

- (a) A system that detects arsenic at levels above 25 ug/L, but below the MCL, shall include the following in its Consumer Confidence Report: "The U.S. Environmental Protection Agency is reviewing the drinking water standard for arsenic because of special concerns that the standard may not be stringent enough. Arsenic is a naturally-occurring mineral known to cause cancer in humans at high concentrations."
- (b) A system that detects nitrate at levels above 23 mg/L (as nitrate), but below the MCL, shall include the following in its Consumer Confidence Report: "Nitrate in drinking water at levels above 45 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider." If a system cannot demonstrate to the Department with at least five years of the most current monitoring data that its nitrate levels are stable, it shall also add the following language to the preceding statement on nitrate: "Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity."
- (c) A system that detects lead above the action level in more than 5%, and up to and including 10%, of sites sampled, shall include the following in its Consumer Confidence Report: "Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and/or flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the USEPA Safe Drinking Water Hotline (1-800-426-4791)."
- (d) A community water system serving 10,000 or more people that has a running annual average for total trihalomethanes compliance determined pursuant to section 64439 that exceeds 0.080 mg/L, but does not exceed the total trihalomethanes MCL, shall include the health effects language in table 64481-F in its Consumer Confidence Report.

NOTE: Authority cited: Sections 116350 and 116375, Health and Safety Code.

Reference: Sections 116275 and 116470, Health and Safety Code.

Section 64483. Consumer Confidence Report Delivery and Recordkeeping.

- (a) Each water system shall mail or directly deliver one copy of the Consumer Confidence Report to each customer.
- (b) The system shall make a good faith effort to reach consumers who are served by the water system but are not bill-paying customers, such as renters or workers, using a mix of methods appropriate to the particular system such as: Posting the Consumer Confidence Reports on the Internet; mailing to postal patrons in metropolitan areas; advertising the availability of the Consumer Confidence Report in the news media; publication in a local newspaper; posting in public places such as cafeterias or lunch

- rooms of public buildings; delivery of multiple copies for distribution by single-biller customers such as apartment buildings or large private employers; and delivery to community organizations.
- (c) No later than the date the water system is required to distribute the Consumer Confidence Report to its customers, each water system shall mail a copy of the report to the Department, followed within 3 months by a certification that the report has been distributed to customers, and that the information is correct and consistent with the compliance monitoring data previously submitted to the Department.
 - (d) No later than the date the water system is required to distribute the Consumer Confidence Report to its customers, each privately-owned water system shall mail a copy of the report to the California Public Utilities Commission.
 - (e) Each water system shall make its Consumer Confidence Report available to the public upon request.
 - (f) Each water system serving 100,000 or more persons shall post its current year's Consumer Confidence Report on a publicly-accessible site on the Internet.
 - (g) Each water system shall retain copies of its Consumer Confidence Reports for no less than 5 years.

NOTE: Authority cited: Sections 16350 and 116375, Health and Safety Code.

Reference: Sections 116275 and 116470, Health and Safety Code.